## REMARKS

**Examiner Interview – by Telephone**

The undersigned appreciates Examiner Duong's time in discussing (by telephone) the Office Action mailed December 31, 2008. This Office Action reflects confusion over a substitute submission what was made in response to the Office Action of April 29, 2008. That Office Action noted an objection to an amendment that was filed on June 22, 2006 (which amendment had already been superseded by another amendment). The undersigned understood/believed that objection was inviting a substitute amendment. Having spoken with the Examiner about this on January 16, 2009, however, the understand now understands that the objection set forth in the Office Action of April 29, 2008, was merely advisory, and that the examiner did not expect any substitute submission.

Therefore, the undersigned hereby confirms that the previously-filed substitute amendment (substitute for the amendment filed June 22, 2006) was not intended to make any further amendments to the application. Therefore, the statement in the latest Office Action that "this amendment does not comply with 37 CFR 1.173(b)" should be withdrawn, as no amendments have been made to the claims of this reissue application since the response filed August 9, 2007, which merely cancelled the rejected claims.

Further, since no amendments have been made to the claims since that time, the reissue declaration that was filed August 26, 2008 should be accepted, and no further declaration needs to be re-executed.

Finally, for purposes of clarification, Applicant provides the following two listings of claims. One listing shows a clean copy of all claims (which have been allowed). The second listing shows an annotated listing of claims, in comparison to the issued patent. **NOTE: This annotated claim listing is NOT making any amendments to the claims. Instead, it is merely reflecting the amendments that have been previously made in this reissue application.**

**Current Listing (clean copy) of Claims**

1. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

an optical film of transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide means, including

a first surface having a wave structure including a plurality of regularly spaced isosceles triangles prisms arranged side-by-side, the prisms having smooth surfaces, and a second surfacing having an optically rough structure for performing diffuse transmissions, wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angles prisms surfaces to gather light from the diffuse transmission into a desired viewing angle for the liquid crystal display panel,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

2. (Canceled)

3. (As patented) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

two optical films of transparent material positioned between said back surface of said liquid crystal display and said top surface of said light guide means, each of said optical films including a first surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prism having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angled prism surfaces to gather light from the diffuse transmission by the second surface into a desired viewing angle for the liquid crystal display panel.

4. (As patented) A liquid crystal display device according to claim 3, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films is oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

5. (As patented) A liquid crystal display device according to claim 3, wherein a polarizer is positioned between said liquid crystal display panel and said two optical

films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are no more than 160 μm apart.

6. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said light crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

an optical film of transparent material positioned between said liquid crystal display panel and said light guide means, including a first surface having a structure including a plurality of quadrangular prisms, which are substantially the same size and shape, in an orderly matrix of equally spaced prisms, the prisms having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said quadrangular prisms is in a range of 95 degrees to 120 degrees for flat, angles sides of the prisms to gather the light from the

diffuse transmission of the second surface into the desired viewing angle for the liquid crystal display device,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said quadrangular prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

7. (As Patented) A liquid crystal display device according to claim 6, wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which peaks and valleys of said quadrangular prisms of said optical film are oriented in a parallel to a polarizing axis of said polarizer and the tops of the quadrangle prisms are no more than 160 μm apart.

8-12. (Canceled)

13. (Previously added) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide having a top surface facing a back surface of said display panel and a side surface receiving said light from said light source;

a reflector provided on a back surface of said light guide; and

an optical film of light transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, said optical film including a first surface having an optically rough structure for diffuse-transmitting said light from said light guide and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface to gather light passing through said second surface in a direction toward said display panel, wherein a top angle of said isosceles triangle prisms of said optical film is in a range of about 90 degrees to about 120 degrees for flat, angle prism surfaces to gather light from the diffuse transmission and directionally distribute said light within a range defined by a given angle,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

14. (Canceled)

15. (Previously added) The liquid crystal display device according to claim 13, wherein luminance of said gathered light is increased within and decreased outside of a desired viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said display panel.

16. (Previously added) The liquid crystal display device according to claim 13, further including a second optical film positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films are oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

17. (Previously added) The liquid crystal display device according to claim 16, wherein said angle is perpendicular.

18. (Previously added) The liquid crystal display device according to claim 16, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer.

19. (Previously Added) The liquid crystal display device according to claim 13, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

20-41. (Canceled)

42. (Previously Added) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface for increasing illumination within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the

horizontal direction wherein a top angle of said isosceles triangle prisms is a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between a liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

43. (Previously added) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart, and wherein a polarizer is positioned between a liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

44. (Previously added) The optical film according to claim 42, wherein a polarizer is positioned between a liquid crystal display panel and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

45. (Previously added) The optical film according to claim 42, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

46. (Previously added) An optical film for use in a liquid crystal display having a front portion and a back portion, said optical film comprising:

diffusing means including an optically rough structure on a first surface of said film for diffuse-transmitting light illuminated proximal to said back portion of said display; and

refracting means on a second surface of said film including a plurality of isosceles triangle prisms arranged side-by-side for directionally distributing said diffuse-transmitted light toward said front portion of said display and for increasing luminance of light within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the

horizontal direction of said front portion of said display, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

47. (Previously added) The optical film according to claim 46. wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

48. (Previously added) The optical film according to claim 46. wherein a polarizer is positioned between said front portion of said liquid crystal display and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

49. (Previously added) A film for use in an optical system comprising a light source and a polarizer having a polarization axis, the film comprising a transparent

material including a first surface and a second surface, said first surface having a structure including a plurality of isosceles triangular prisms arranged side-by-side for increasing luminance of light passing through said film in a direction corresponding to said polarization axis of said polarizer, and said second surface having an optically rough structure for diffuse transmitting light emitted by said light source, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart, and wherein said polarizer is positioned between a liquid crystal display panel and said film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

50. (Previously added) The optical film according to claim 49. wherein said optical film is positioned within a liquid crystal display, said prisms having smooth surfaces for gathering diffuse transmitted light for increasing illumination within and decreasing illumination outside of

a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of the liquid crystal display.

51-66. (Canceled)

**Current Listing of Claims (annotated to show PREVIOUS amendments)**

1. (last amendment) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

an optical film of transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide means, including a first surface having a wave structure including a plurality of regularly spaced isosceles triangles prisms arranged side-by-side, the prisms having smooth surfaces, and a second surfacing having an optically rough structure for performing diffuse transmissions, wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angles prisms surfaces to gather light from the diffuse transmission into a desired viewing angle for the liquid crystal display panel,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles

triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

2. (Canceled)

3. (Original) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

two optical films of transparent material positioned between said back surface of said liquid crystal display and said top surface of said light guide means, each of said optical films including a first surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prism having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120

degrees for flat, angled prism surfaces to gather light from the diffuse transmission by the second surface into a desired viewing angle for the liquid crystal display panel.

4. (Original) A liquid crystal display device according to claim 3, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films is oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

5. (Original) A liquid crystal display device according to claim 3, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are no more than 160 μm apart.

6. (Previously amended) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said light crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

an optical film of transparent material positioned between said liquid crystal display panel and said light guide means, including a first surface having a structure including a plurality of quadrangular prisms, which are substantially the same size and shape, in an orderly matrix of equally spaced prisms, the prisms having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said quadrangular prisms is in a range of 95 degrees to 120 degrees for flat, angles sides of the prisms to gather the light from the diffuse transmission of the second surface into the desired viewing angle for the liquid crystal display device,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said quadrangular prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

7. (As Patented) A liquid crystal display device according to claim 6, wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which peaks and valleys of said quadrangular prisms of said optical film are oriented in a parallel to a polarizing axis of said polarizer and the tops of the quadrangle prisms are no more than 160 μm apart.

8-12. (Canceled)

13. (Previously added) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide having a top surface facing a back surface of said display panel and a side surface receiving said light from said light source;

a reflector provided on a back surface of said light guide; and

an optical film of light transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, said optical film including a first surface having an optically rough structure for diffuse-transmitting said light from said light guide and a second surface having a wave structure including a plurality of

isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface to gather light passing through said second surface in a direction toward said display panel, wherein a top angle of said isosceles triangle prisms of said optical film is in a range of about 90 degrees to about 120 degrees for flat, angle prism surfaces to gather light from the diffuse transmission and directionally distribute said light within a range defined by a given angle,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

14. (Canceled)

15. (Previously added) The liquid crystal display device according to claim 13, wherein luminance of said gathered light is increased within and decreased outside of a desired viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said display panel.

16. (Previously added) The liquid crystal display device according to claim 13, further including a second optical film positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films are oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

17. (Previously added) The liquid crystal display device according to claim 16, wherein said angle is perpendicular.

18. (Previously added) The liquid crystal display device according to claim 16, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer.

19. (Previously Added) The liquid crystal display device according to claim 13, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

20-41. (Canceled)

42. (Previously Added) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface for increasing illumination within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction wherein a top angle of said isosceles triangle prisms is a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between a liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

43. (Previously added) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart, and wherein a polarizer is positioned between a liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

44. (Previously added) The optical film according to claim 42, wherein a polarizer is positioned between a liquid crystal display panel and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

46. (Previously added) The optical film according to claim 42, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

46. (Previously added) An optical film for use in a liquid crystal display having a front portion and a back portion, said optical film comprising:

diffusing means including an optically rough structure on a first surface of said film for diffuse-transmitting light illuminated proximal to said back portion of said display; and

refracting means on a second surface of said film including a plurality of isosceles triangle prisms arranged side-by-side for directionally distributing said diffuse-transmitted light toward said front portion of said display and for increasing luminance of light within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said front portion of said display, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160 μm apart.

47. (Previously added) The optical film according to claim 46. wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

48. (Previously added) The optical film according to claim 46. wherein a polarizer is positioned between said front portion of said liquid crystal display and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

49. (Previously added) A film for use in an optical system comprising a light source and a polarizer having a polarization axis, the film comprising a transparent material including a first surface and a second surface, said first surface having a structure including a plurality of isosceles triangular prisms arranged side-by-side for increasing luminance of light passing through said film in a direction corresponding to said polarization axis of said polarizer, and said second surface having an optically rough structure for diffuse transmitting light emitted by said light source, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart, and wherein said polarizer is

positioned between a liquid crystal display panel and said film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

50. (Previously added) The optical film according to claim 49. wherein said optical film is positioned within a liquid crystal display, said prisms having smooth surfaces for gathering diffuse transmitted light for increasing illumination within and decreasing illumination outside of

a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of the liquid crystal display.

51-66. (Canceled)

In view of the foregoing, Applicant respectfully submits that this reissue application is in good and proper form for allowance.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

/Daniel R. McClure/

Daniel R. McClure
Registration No. 38,962

**THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.**
Suite 1500
600 Galleria Parkway S.E.
Atlanta, Georgia 30339
(770) 933-9500